

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
24 March 2005 (24.03.2005)

PCT

(10) International Publication Number
WO 2005/026702 A1

(51) International Patent Classification⁷: G01N 21/05, 33/577

(21) International Application Number:
PCT/NZ2004/000222

(22) International Filing Date:
20 September 2004 (20.09.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
528323 18 September 2003 (18.09.2003) NZ

(71) Applicants and

(72) Inventors: WU, Yinqiu [NZ/NZ]; 291 Cambridge Road, Hillcrest, Hamilton (NZ). MITCHELL, John, Stanton [NZ/NZ]; 24 Basley Road, Rotorua (NZ).

(74) Agents: CALHOUN, Douglas, C et al.; A J Park, 6th Floor Huddart Parker Building, Post Office Square, P O Box 949, Wellington, 6015 (NZ).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

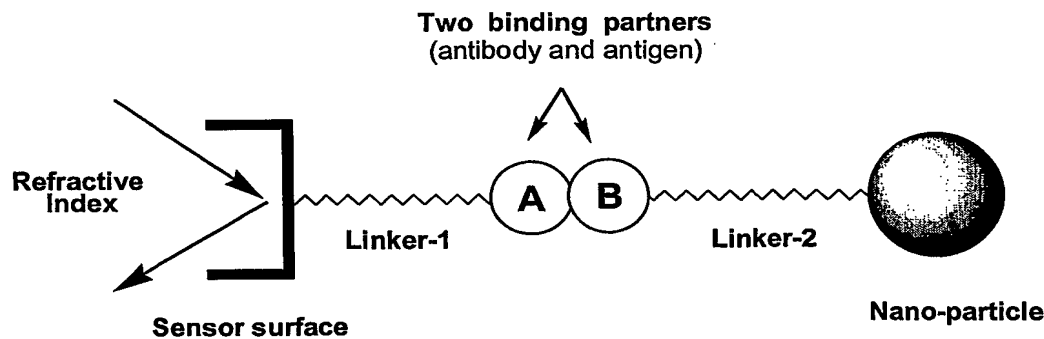
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: IMMUNOASSAY



A new optical biosensor-based immunoassay design

(57) Abstract: The invention provides a method for detecting a hapten in a sample comprising the steps of: a) providing a sample potentially containing the hapten; b) providing a pre-determined amount of a first moiety, said first moiety being bound to a signaller and separated therefrom by a first linker, which first moiety is either: i) a binding partner that specifically binds to the hapten of interest, or ii) the hapten of interest or an analogue thereof; wherein said signaller is a macromolecule or a nanoparticle providing high mass signal; c) providing a flow of a) and b) separately or together to an immobilised second moiety, said second moiety being bound to the surface of a sensor and separated therefrom by a second linker, which second moiety is either: i) a binding partner that specifically binds to the hapten of interest, or ii) is the hapten of interest or an analogue thereof, providing that when the first moiety is a binding partner, the second moiety is a hapten or hapten analogue and when the first moiety is a hapten or hapten analogue, the second moiety is a binding partner; and d) detecting the amount of first moiety bound to second moiety.